



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,359	07/26/2006	Shuzo Fujiwara	SANK.0010	6586
38327	7590	10/01/2007	EXAMINER	
REED SMITH LLP			HAYES, BRET C	
3110 FAIRVIEW PARK DRIVE, SUITE 1400			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22042			3641	
			MAIL DATE	DELIVERY MODE
			10/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,359	FUJIWARA ET AL.	
	Examiner	Art Unit	
	Bret Hayes	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-5 and 9-13 is/are rejected.
- 7) Claim(s) 6-10 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 July 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>26 JUL 06</u> .	6) <input type="checkbox"/> Other: ____ .

DETAILED ACTION

Claim Objections

1. Claims 9 and 10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1, from which claims 9 and 10 depend, recites “a bomb”. The recitation in claims 9 and 10 of “two or more bombs” improperly broadens the claim and fails to further limit the previous subject matter.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Publication No. US 2003/0131722 A1 to Donovan (cited by Applicants).

4. Re claim 1, Donovan discloses the invention substantially as claimed including a blasting method of processing a bomb **1** by forming an explosive layer **6, 7** on an outermost surface of the bomb, Fig. 5, for example, to be processed having a casing, an inherent part of 81mm mortar rounds as disclosed, in a particular shape, Figs. 3 – 5, for example, and by exploding the explosive layer **[0026]**, wherein the explosive layer comprises a first explosive layer **7** formed around the outermost surface of the casing and a second explosive layer **6** formed as to surround the first explosive layer; an explosive in the second explosive layer has a lower explosion

velocity than an explosive in the first explosive layer; and the second and first explosive layers are exploded at a certain time interval* by igniting a particular region of the second explosive layer; except for the explosive in the second explosive layer has a higher explosion velocity than an explosive in the first explosive layer. *With respect to a certain time interval, while the term interval is understood to mean at least some measure of time, Donovan, at [0034], discloses "The whole process occurs seemingly simultaneously and within micro-seconds." This admission that the whole process occurs in microseconds allows for a broad and reasonable interpretation of previous recitations of 'simultaneous' to include microsecond space of time between initiations of layers 6 and 7, which would allow for anticipation of this limitation of the claim. Therefore, Donovan discloses the claimed invention except for the rearrangement of the layers 6 and 7. It would have been obvious to one having ordinary skill in the art at the time the invention was made to so arrange the layers, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. In this case, the device as disclosed by Donovan would still function to the end of destroying a munition as disclosed regardless of whether layer 6 is placed outside layer 7 or vice versa.

5. Re claim 2, Donovan discloses the claimed invention including wherein the casing is cylindrical in shape; the first and second explosive layers are placed symmetrically with respect to an axis of the casing; except for explicitly stating that the ignition region is placed at an intersection of the axis of the casing with the second explosive layer. As above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to so arrange the ignition region, since it has been held that rearranging parts of an invention involves only

routine skill in the art. *In re Japiske*, 86 USPQ 70. In this case, the ultimate function of Donovan would still be realized regardless of where the ignition region was located.

6. Re claim 3, Donovan discloses the claimed invention except for wherein the ignition region is placed on top of the second explosive layer; and no first explosive layer is formed between the ignition region and a top region of the casing. Again, as above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to so arrange the ignition region, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. In this case, the ultimate function of Donovan would still be realized regardless of where the ignition region was located.

7. Re claim 4, Donovan discloses the claimed invention except for wherein the first explosive layer is formed with an explosive ANFO. It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement ANFO, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Donovan discloses that the second layer is made a lower class explosive. To select any other known lesser explosive would have been obvious to a skilled artisan at the time of invention.

8. Re claim 5, Donovan discloses the claimed invention including wherein the first explosive layer is formed with an explosive having a desirable flowability, [0032].

9. Re claims 9 and 10, in view of the disclosure of Donovan, to destroy more than one bomb at a time would be obvious to one of ordinary skill in the art at the time the invention was made, since it has been held that mere duplication of the essential working parts of a device involves

only routine skill in the art. *St, Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. In this case, ‘working parts’ is construed to mean the bomb itself.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Donovan in view of US Patent No. 5,574,203 to Noel et al. (*Noel*) (also cited by Applicants).

11. Re claim 11, Donovan discloses the claimed invention except for wherein the bomb to be processed contains a chemical agent hazardous to a human body inside the casing and is blasted in a tightly sealed vessel. Noel teaches destroying a munition containing a chemical agent hazardous to a human body, Abstract, for example, inside the casing and is blasted in a tightly sealed vessel **12, 13**, in the same field of endeavor, munition destruction, for the purpose of containing toxic substances. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Donovan to include the structure and method as taught by Noel in order to contain toxic substances.

12. Re claim 12, Donovan in view of Noel discloses the claimed invention. Noel further teaches a fluidal substance, col. 5, lines 47 – 65, within the tightly sealed vessel.

13. Re claim 13, Donovan in view of Noel discloses the claimed invention except for the preferred thickness of the wall. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a wall thickness of 250mm or more, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In this case, safety of local workers could not be ignored and the selection of the appropriate thickness wall would be an obvious matter of design choice to ensure that safety.

Allowable Subject Matter

14. Claims 6 – 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (571) 272 – 6902 or email address bret.hayes@uspto.gov. The examiner can normally be reached Monday through Friday from 5:30 am to 2:00 pm, Eastern Standard Time.

The Central FAX Number is **571-273-8300**.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached at (571) 272 – 6873.

/Bret Hayes/

Examiner, Art Unit 3641

1-Oct-07